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Fu-Chi Chang, Chia-Jiu Wang

March 2002 ACM SIGARCH Computer Architecture News, Volume 30 Issue 1

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An investigation of a suite of RSA processors using different exponentiation and modular arithmetic algorithms is the main theme of this paper. The execution time and the amount of hardware required of different algorithms used to implement the RSA processor are compared. The modular algorithms examined in this paper are classical modular algorithm, Barrett's modular algorithm, Hensel's odd division and Montgomery's modular algorithm. The exponentiation algorithms implemented are the left-to-rig ...

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R. Gregory Taylor

September 2002 ACM SIGACT News, Volume 33 Issue 3

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Dan Boneh

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M. Shand, P. Bertin, J. Vuillemin

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Digital signatures for flows and multicasts

Chung Kei Wong, Simon S. Lam

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List decoding: algorithms and applications

Madhu Sudan

March 2000 ACM SIGACT News, Volume 31 Issue 1

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Additional Information: full citation, citings, index terms

Signature schemes based on the strong RSA assumption

Ronald Cramer, Victor Shoup

November 1999 Proceedings of the 6th ACM conference on Computer and communications security

Full text available: pdf(530.95 KB)

Additional Information: full citation, abstract, references, citings, index terms

We describe and analyze a new digital signature scheme. The new scheme is quite efficient, does not require the the signer to maintain any state, and can be proven secure against adaptive chosen message attack under a reasonable intractability assumption, the so-called strong RSA assumption. Moreover, a hash function can be incorporated into the scheme in such a way that it is also secure in the random oracle model under the standard RSA assumption.

#### 6 On the fly signatures based on factoring

Guillaume Poupard, Jacques Stern

November 1999 Proceedings of the 6th ACM conference on Computer and communications security

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In response to the current need for fast, secure and cheap public-key cryptography largely induced by the fast development of electronic commerce, we propose a new on the fly signature scheme, i.e. a scheme that requires very small on-line work for the signer It combines provable security based on the factorization problem, short public and secret keys, short transmission and minimal on-line computation. It is the first RSA-like signature scheme that can be used for both ef ...

## 7 Cryptographic limitations on learning Boolean formulae and finite automata

Michael Kearns, Leslie Valiant

January 1994 Journal of the ACM (JACM), Volume 41 Issue 1

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In this paper, we prove the intractability of learning several classes of Boolean functions in the distribution-free model (also called the Probably Approximately Correct or PAC model) of learning from examples. These results are representation independent, in that they hold regardless of the syntactic form in which the learner chooses to represent its hypotheses. Our methods reduce the problems of cracking a number of well-known public-key cryptosystems to the 1 ...

### A new public key cryptosystem based on higher residues

David Naccache, Jacques Stern

November 1998 Proceedings of the 5th ACM conference on Computer and communications security

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#### How to securely replicate services

Michael K. Reiter, Kenneth P. Birman

May 1994 ACM Transactions on Programming Languages and Systems (TOPLAS),

Volume 16 Issue 3

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Additional Information: full citation, abstract, references, citings, index

We present a method for constructing replicated services that retain their availability and integrity despite several servers and clients being corrupted by an intruder, in addition to others failing benignly. We also address the issue of maintaining a causal order among client requests. We illustrate a security breach resulting from an intruder's ability to effect a violation of causality in the sequence of requests processed by the service and propose an approach to counter this attack. A ...

Keywords: causality, replication, state machines, threshold cryptography

10 Efficient verifiable encryption (ar Giuseppe Ateniese	nd fair exchange) of digital signatures	
November 1999 Proceedings of the communications s	e 6th ACM conference on Computer and security	
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the other's item or neither user of primitive that can be used to builtems exchanged represent digital.	wo users to exchange items so that either each user gets does. In [2], verifiable encryption is introduced as a ld extremely efficient fair exchange protocols where the al signatures. Such protocols may be used to digitally sign w simple schemes for verifiable encryption of digital	
<b>Keywords:</b> contract signing pro public-key cryptography, verifiat	blem, digital signatures, fair exchange, proof of knowledge, ble encryption	
11 Strong signature schemes Shafi Goldwasser, Silvio Micali, And December 1983 Proceedings of th computing	dy Yao e fifteenth annual ACM symposium on Theory of	
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Hellman[3]. Rivest, Shamir and of a signature scheme based on	ased on trapdoor functions has been introduced by Diffie and Adleman[8] gave the first number theoretic implementation a trapdoor function. If f is a trapdoor function and m are of m. The signature can be verified by computing f(f	i 
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information Shafi Goldwasser, Silvio Micali May 1982 <b>Proceedings of the fo</b>	urteenth annual ACM symposium on Theory of	
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This paper proposes an Encrypti adversary, who knows the encry any information about the clear-	on Scheme that possess the following property: An option algorithm and is given the cyphertext, cannot obtain text. Any implementation of a Public Key Cryptosystem, as in [8], should possess this property. Our Encryption Scheme theoretic implementations of a Public Key Cryptosystem due	<u>;</u>
Yair Frankel, Peter Gemmell, Moti July 1996 Proceedings of the tw	rogram checking and robust function sharing Yung venty-eighth annual ACM symposium on Theory of	**********
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Adi Shamir	te polynomials which are hard to factor venty-fifth annual ACM symposium on Theory of	

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	Woven fabric is formed from two sets of threads such that all the threads in one set are parallel to each other and perpendicular to all threads in the other set. The set of threads which run the length of the fabric is called the warp; the set of crosswise threads is called the weft. These two sets of threads are interwoven to form a mesh which is called a web. The design of a woven fabric originates with an artist's sketch. Since the threads within each set remain parallel to e	
	Functional partitioning improvements over structural partitioning for packaging constraints and synthesis: tool performance Frank Vahid, Thuy Dm Le, Yu-Chin Hsu April 1998 ACM Transactions on Design Automation of Electronic Systems (TODAES),	
	Volume 3 Issue 2  Full text available: pdf(225.74 KB)  Additional Information: full citation, abstract, references, citings, index terms	
	Incorporating functional partitioning into a synthesis methodology leads to several important advantages. In functional partitioning, we first partition a functional specification into smaller subspecifications and then synthesize structure for each, in contrast to the current approach of first synthesizing structure for the entire specification and then partitioning that structure. One advantage is the improvement in I/O performance and package count, when partitioning among hardware block	
	Keywords: behavioral synthesis, functional partitioning, system-level design	
	Anonymous authentication with subset queries (extended abstract)  Dan Boneh, Matt Franklin  November 1999 Proceedings of the 6th ACM conference on Computer and communications security	
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	We develop new schemes for anonymous authentication that support identity escrow. Our protocols also allow a prover to demonstrate membership in an arbitrary subset of users; key revocation is an important special case of this feature. Using the Fiat-Shamir heuristic, our interactive authentication protocols yield new constructions for non-interactive group signature schemes. We use the higher-residuosity assumption, which leads to greater efficiency and more natural security proofs than pr	
	Keywords: anonymous authentication, group signature, identity escrow	
18	Secure group communications using key graphs Chung Kei Wong, Mohamed Gouda, Simon S. Lam February 2000 IEEE/ACM Transactions on Networking (TON), Volume 8 Issue 1 Full text available: pdf(345.54 KB) Additional Information: full citation, references, citings, index terms, review	

Keywords: confidentiality, group communications, group key management, key distribution, multicast, privacy, rekeying, security

#### 19 Multicast security and its extension to a mobile environment

Li Gong, Nachum Shacham

March 1995 Wireless Networks, Volume 1 Issue 3

Full text available: pdf(1.22 MB)

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Multicast is rapidly becoming an important mode of communication and a good platform for building group-oriented services. To be used for trusted communication, however, current multicast schemes must be supplemented by mechanisms for protecting traffic, controlling participation, and restricting access of unauthorized users to data exchanged by the participants. In this paper, we consider fundamental security issues in building a trusted multicast facility. We discuss techniques for group- ...

#### 20 25 years of quantum cryptography

Gilles Brassard, Claude Crépeau

September 1996 ACM SIGACT News, Volume 27 Issue 3

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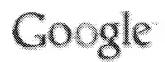
The fates of SIGACT News and Quantum Cryptography are inseparably entangled. The exact date of Stephen Wiesner's invention of "conjugate coding" is unknown but it cannot be far from April 1969, when the premier issue of SIGACT News---or rather SICACT News as it was known at the time---came out. Much later, it was in SIGACT News that Wiesner's paper finally appeared [74] in the wake of the first author's early collaboration with Charles H. Bennett [7]. It was also in < ...

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